| Work Ord June-12-13 9:2      |                       | 3045                               |                | *103                 | 3045*                    |            |              |               |          |       |                  | Page 1         |     |
|------------------------------|-----------------------|------------------------------------|----------------|----------------------|--------------------------|------------|--------------|---------------|----------|-------|------------------|----------------|-----|
| Item ID:<br>Revision ID:     | D4092-041             |                                    | ·              | Accept               | *N900                    | <b>040</b> | 100          | )*            | Setup    | Start | I W              | S1*            |     |
| Item Name:                   | Maintenance           | Step Assembly                      |                |                      |                          |            |              |               |          | Stop  | *N               | S2*            |     |
| Start Date:<br>Required Date | 6/11/13<br>e: 6/11/13 | Start Qty: 2.00<br>Req'd Qty: 2.00 | *2*<br>*2*     |                      | Cust Item I<br>Customer: | D:         |              |               |          |       |                  |                | ÷   |
| Réference:                   |                       |                                    |                |                      |                          |            | _            |               | D        | Stant |                  |                |     |
| Approvals:                   | Process Pl            | an: MC                             | Date: 13-06-13 | Tooling:             | Da                       | ate:       |              |               | Run      | Start | 17               | R1*            |     |
| , A.A.                       |                       |                                    | Date:          | SPC (Y/N):           | Da                       | ate:       |              |               |          | Stop  | *N               | R2*            |     |
| Sequence ID/<br>Work Center  | ID                    | Operation Description              |                | Set Up/<br>Run Hours | Tool ID                  | Tool #     | Plan<br>Code | Accept<br>Qty | Re<br>Qt |       | Reject<br>Number | Insp.<br>Stamp |     |
| Draw Nbr                     | Re                    | vision Nbr                         |                |                      |                          |            |              |               |          |       |                  |                |     |
| D4092                        | В                     |                                    |                |                      |                          |            |              |               |          |       |                  |                |     |
| 100                          |                       | Pick Kit                           |                | 0.00                 |                          |            |              |               |          |       |                  |                |     |
| *1100* Packaging Packaging   |                       | Мето                               |                | 0.00                 |                          |            |              |               |          |       |                  |                | i i |
| *110<br>*110*                |                       |                                    |                | 0.00                 |                          |            |              | 7             |          |       |                  | Sp             | 6   |
| Small Fab                    |                       | - Memo                             |                | 0.00                 |                          |            |              |               |          |       | -                | <i>\)</i> _    | ,-  |

120

Small Fab

\*120\*

Quality Control

QC5- Inspect part completeness to step on W/O

Assemble as per Dwg Torque screws up to 15-25 in- lbs

Memo

0.00

| DQA:            |          |           | Date:      |          |          |   |          |                     |                           |             |                |               | 12          |                   |
|-----------------|----------|-----------|------------|----------|----------|---|----------|---------------------|---------------------------|-------------|----------------|---------------|-------------|-------------------|
| QA Closed:      |          |           | Date:      |          |          | WORK ORDER NON                                  | -CC      | ONFO                | RMANCE / UPDATE           |             | ork Order up   | date only     | _           | AEROSPACE         |
| QA Closed.      |          | -         | Date.      |          |          |   |          |                     |                           | VVC         | ork Order up   | date only     |             |                   |
| Work Orde       | er:      |           |            |          | İ        | DISPOSITION                                     |          |                     | AGA                       | AINST DE    | PARTMENT/      | PROCESS       |             |                   |
|                 | -        |           | _          |          | _        | Rework  | 1        | •                   | Skid-tube Cross           | stube       |                | Water Jet     | $\neg$      | Engineering       |
| Part i          | No.      |           |            |          |          | Scrap   |          |                     | <del>-</del>              | all Fab     | Proc           | d. Eng. Coor. |             | Quality           |
|                 | -        |           |            |          | _        | Use-as-is                                       | 1 1      | Therr               | moforming Fini            | ishing      | Rec/Stor       | e/Packaging   |             | Other             |
| NCR I           | ۷o       |           |            |          |          | Suspected Unapproved                            | ]        |                     | Large Fab Comp            | posite      |                | Supplier      |             |                   |
| D t             | Т        |           |            |          | Daga     |   |          |                     | Action                    |             | C: 0           |               | <del></del> |                   |
| Root            |          | Date      | Ston       | O+1.     | Desci    | ription of work order update or non-conformance |          | Initial<br>nief Eng |                           |             | Sign &<br>Date | Verification  |             | QC Inspector      |
| Cause<br>Design | $\Box$   | Date      | Step       | Qty      |          | or non-comormance                               | Cii      | ilei, ciig          | Description               |             | Date           | vermeation    | -           | QC IIIspector     |
| Doc/Data        | Н        |           |            |          |          |   | ĺ        |                     |                           |             |                |               |             |                   |
| Equip/Tooling   | Н        |           |            |          |          |   | 1        |                     |                           |             |                |               |             |                   |
| Handling/Pre    | H        |           |            |          |          |   |          |                     |                           |             |                |               |             |                   |
| Material        | П        |           |            |          |          |   |          |                     |                           |             |                |               |             |                   |
| Operator        | П        |           |            |          |          |   |          |                     |                           |             |                |               |             |                   |
| Offset/Setup    | П        |           |            |          |          |   |          |                     |                           |             |                |               | Ì           |                   |
| Process         | П        |           |            |          |          |   |          |                     |                           |             |                |               |             |                   |
| Supplier        |          |           |            |          |          |   |          |                     |                           |             |                |               |             |                   |
| Training        |          |           |            |          |          |   |          |                     |                           |             |                |               |             |                   |
| Transport       |          |           |            |          |          |   |          |                     | c                         |             |                |               |             |                   |
| Unapproved _    |          |           | <u> </u>   | <u> </u> |          |   |          |                     |                           |             |                |               |             | <u> </u>          |
|                 |          |           |            |          |          |   | FA       | ULT CA              | TEGORY                    |             |                |               |             |                   |
| Landi           |          |           |            |          | _        | General   | _        | 7                   |                           | <del></del> | 1              | r             | _           |                   |
|                 | $\vdash$ | Bending   |            |          | _        | Bend  | $\vdash$ | 1                   | Program                   |             | Outside Dim    | ŀ             |             | ressure/Forced    |
|                 | Н        | Centre N  | ot Concer  | ntric    |          | BOM/Route                                       | _        | Grain               |                           | _           | Over/Under     | ŀ             |             | et-up             |
|                 | -        | Cracks    |            |          |          | Broken/Damage/Defect                            |          | Hardwa              |                           |             | Part Incorred  | }             |             | emperature/Cure   |
|                 | Ш        | Crimp/Kii | nk/Ripple  | /Wave    |          | Burrs   | $\vdash$ | <b>-</b> 1          | ion Incomplete/Unqualifie | ed          | Part Lost/Mi   |               | _           | /eld              |
|                 | Н        | Cuffs     |            |          | _        | Contamination                                   | <u>_</u> | 4                   | tions Incomplete/Unclear  | _           | Part Moved     |               | \^          | rong Stock Pulled |
|                 | -        | Crushing  |            |          | <u> </u> | Countersink                                     | <u></u>  | ┪ `                 | gned/off center           | _           | Positioned V   |               | _           |                   |
|                 | $\vdash$ | Heat Trea |            |          |          | Cut Too Short                                   | <u></u>  | Mislab              |                           |             | Power Loss/    | Surge         | 0           | ther              |
|                 | $\vdash$ | Inspectio | •          | Tube     |          | Drawing   |          | Misrea              |                           |             |                |               |             |                   |
|                 | $\vdash$ | Marks/Cl  |            |          | _        | Drill Holes                                     | <b>—</b> | Off-set             |                           |             |                |               |             |                   |
|                 | -        | Turning S |            |          |          | Finish  | <u></u>  | 4                   | Calibration               |             |                |               |             |                   |
| i               | 1 1      | Wave/Tu   | ist in Tul | 16       | - 1      | Fit/Function                                    | 1        | IOut of             | Seguence                  |             |                |               |             |                   |

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

| Work Order  June-12-13 9:25.              |                       | 3045   |               | *103                 | 3045*                    |            |              |               |                   |                  | Page           | 2 |
|---|-----------------------|--|---------------|----------------------|--------------------------|------------|--------------|---------------|-------------------|------------------|----------------|---|
| Revision ID:                              | D4092-041 Maintenance | Step Assembly                                  |               | Accept               | *N900                    | <b>040</b> | 100          | )* s          | etup Star<br>Stop | 1.71             | S1*<br>S2*     |   |
| Start Date: ( Required Date: ( Reference: | 6/11/13<br>6/11/13    | Start Qty: 2.00<br>Req'd Qty: 2.00             | *2*<br>*2*    |                      | Cust Item I<br>Customer: | D:         |              |               | Q.                |                  |                |   |
| • • •                                     | Process Pla           | an:  | Date:         | Tooling: SPC (Y/N):  |                          | ate:       |              | R             | tun Star<br>Stop  |                  | R1*<br>R2*     |   |
| Sequence ID/<br>Work Center ID            | )                     | Operation Description Identify as per dwg & St | ock Location: | Set Up/<br>Run Hours | Tool ID                  | Tool #     | Plan<br>Code | Accept<br>Qty | Reject<br>Qty     | Reject<br>Number | Insp.<br>Stamp |   |
| *130* Packaging Packaging                 |                       | Мето   |               | 0.00                 |                          |            |              | 2x            |                   |                  | 13-7           | _ |

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

\*140\*

Quality Control

ML > 13-07-26 MF 13-7-24

| DQA:   |                   | _ Date:                 |            |                             | ODE ODDED NON                 | · cc     |                             | 28488ICE / LIE         | DATE                   |                        |                            |                            | G <sup>w</sup>          |                 |
|--|-------------------|-------------------------|------------|-----------------------------|-------------------------------|----------|-----------------------------|------------------------|------------------------|------------------------|----------------------------|----------------------------|-------------------------|-----------------|
| QA Closed:   |                   | Date:                   |            | VVC                         | ORK ORDER NON                 |          | JNFOI                       | RIVIAINCE / UF         |                        | Work Ord               | der up                     | odate only                 | 7                       | AEROSPACE       |
| Work Orde  | or.               |                         |            |                             | DISPOSITION                   |          |                             |                        | AGAINST [              | DEPARTM                | 1ENT/                      | /PROCESS                   |                         |                 |
| Part N   |                   |                         |            | _                           | Rework Scrap                  |          |                             | Skid-tube Machining    | Crosstube<br>Small Fab |                        |                            | Water Jet<br>d. Eng. Coor. |                         | neering Quality |
| NCR N  | lo                |                         |            | Suspe                       | Use-as-is<br>ected Unapproved |          | Thern                       | noforming<br>Large Fab | Finishing<br>Composite | Red                    | c/Stor                     | e/Packaging<br>Supplier    |                         | Other           |
| Root   |                   |                         |            | Description o               | of work order update          | Ī        | nitial                      | Acti                   | ion                    | Sign                   | &                          |                            |                         |                 |
| Cause  | Date              | Step                    | Qty        | or non                      | -conformance                  | Ch       | ief Eng                     | Descri                 | iption                 | Da                     | te                         | Verification               | QC                      | Inspector       |
| Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved |                   |                         |            | ·                           |                               |          |                             |                        |                        |                        |                            |                            |                         |                 |
|  |                   |                         |            |                             |                               | FA       | ULT CAT                     | EGORY                  |                        |                        |                            |                            |                         |                 |
| Landir   | ng Gear           |                         |            | <del></del>                 | General                       | _        | 1                           |                        | -                      |                        |                            | سعم                        |                         |                 |
|  | Cracks<br>Crimp/K | Not Concer              |            | Burrs                       | /Damage/Defect                |          | Grain<br>Hardwa<br>Inspecti | on Incomplete/Un       | ·                      | Over/l Part In Part Lo | Jnder<br>correct<br>ost/Mi | · -                        | Set-up<br>Tempe<br>Weld | rature/Cure     |
| _ <u> </u>   | Cuffs             | _                       |            | Contam                      |                               | $\vdash$ | 1                           | ions Incomplete/U      | inclear                | Part M                 |                            | L                          | Wrong                   | Stock Pulled    |
| -  | Crushing Heat Tre |                         | Tuhe       | Counte<br>Cut Too<br>Drawin | Short                         |          | Mislabe<br>Misread          |                        |                        | Position               |                            |                            | Other                   |                 |
| Ţ  | Marks/C           | ٠.                      | TUDE       | Drill Ho                    | _                             | $\vdash$ | Off-set                     | ı                      |                        |                        |                            |                            |                         |                 |
|  |                   | Sequence                |            | Finish                      | ,<br>NC2                      | $\vdash$ | ł                           | Calibration            |                        |                        | ·                          |                            |                         |                 |
|  |                   | sequence<br>wist in Tul |            | Fit/Fun                     | estion.                       | $\vdash$ | 4                           | alibration             |                        |                        |                            |                            |                         |                 |
|  | IVVAVE/II         | מוכו חווצועט            | , <b>L</b> | 1 1517/5187                 | 17   18 171                   |          | 11 111t Ot 5                | AGUANCA                |                        |                        |                            |                            |                         |                 |

June-12-13 9:25:51 AM

Work Order ID:

103045

Parent Item:

D4092-041

Parent Item Name:

Maintenance Step Assembly

**Start Date:** 6/11/13

Required Date: 6/11/13

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP REV:A NEW ISSUE 10-06-01 JLM VERIFIED BY:DD

| Component Item ID/        | 639 JLM VERIFIE Replacement | Mfg/         | Bin  | Primary         | Last     | Route   | Unit of  | Qty on   | Qty per Kit                               |                |            | ate        | Status   |
|---------------------------|-----------------------------|--------------|------|-----------------|----------|---------|----------|----------|---|----------------|------------|------------|--|
| Item Name                 | Item ID                     | Purch        | Item | Location        | Location | Seq ID  | Measure  | e Hand   |   | Qty            | Issued Is  | ssued      |  |
| D4092-1  Maintenance Step |                             | Manufactured | No   |                 |          | 100     | Each     | 2.0000   | 2   | 4)             | N.D.       | /3:        | -07-23   |
|                           |                             |              |      | Location        |          | Loc Qty | <u>L</u> | oc Code  | 0   |                | ί          |            |  |
|                           |                             |              |      | GA              |          | 1       |          |          | BI  | 02366          |            |            |  |
|                           |                             |              |      | 778             | 52       | 1       |          |          |   | <del> </del>   |            |            |  |
|                           |                             |              |      | ST241A          |          | 1       |          |          |   |                |            |            |  |
| ¥                         |                             |              |      | 743             | 03       | 1       |          |          |   | $\bigcirc$     |            | 0          |  |
| D4093-1                   |                             | Manufactured | No   |                 |          | 100     | Each     | 1.0000   | 1   | (2)            | M.         | LV.        | • 1  |
| Bracket                   |                             |              |      |                 |          |         | _        |          |   |                |            | /.Ce       |  |
|                           |                             |              |      | <u>Location</u> |          | Loc Oty | Ţ        | oc Code  | Q a                                       | 9653           | ·          |            | 1  |
|                           |                             |              |      | ST201           | 5.4      | 1       |          |          | $\mathcal{D}^{I}$                         | 162            |            |            |  |
| - D.1002.2                |                             |              | No   | 937             | 34       | 100     | Each     | 4.0000   | 1   | (2)            |            | .1         | 1  |
| • <b>D4093-3</b> Bracket  |                             | Manufactured | INO  |                 |          | 100     | Lacii    | 4.0000   |   |                | M.h        | <u>V.</u>  | And the second s |
| Diacket                   |                             |              |      | Location        |          | Loc Qty | ī        | oc Code  |   |                | 7          |            |  |
|                           |                             |              |      | ST201           |          | 4       | BIO      | 2860     | (1) Re                                    | 19/53          |            |            |  |
|                           |                             |              |      | 932             | .53      | 4       | 0        |          |   | V              |            |            |  |
| ● -D4093-5                |                             | Manufactured | No   |                 |          | 100     | Each     | 2.0000   | 2   | 4              | . 1        | ۸,         |  |
| Bracket                   |                             | Manufactured |      |                 |          |         |          |          |   |                |            | ( <i>V</i> | where stores   |
|                           |                             |              |      | Location        |          | Loc Oty | <u>I</u> | Loc Code |   |                | $\sim$ $l$ |            |  |
|                           |                             |              |      | ST139           |          | 2       |          |          | - B1                                      | <u>023</u> 55( | (2x)       |            | •  |
|                           |                             |              |      | 996             | 513      | 2       | Bla      | 0278(    | (2) = = = = = = = = = = = = = = = = = = = |                |            |            | •  |
| MS24694-S54               |                             | Purchased    | No   |                 |          | 100     | Each     | 552.0000 | $\bigcirc_2$                              | 4              | n/ 11      | 1          |  |
| Screw                     |                             |              |      |                 |          |         |          |          |   |                | 'IJ- XV    |            |  |
| •                         |                             |              |      | <b>Location</b> |          | Loc Qty | <u>I</u> | Loc Code |   |                | ι          |            |  |
|                           |                             |              |      | ST303           |          | 552     |          |          |   | -              |            |            |  |

125535

IPP REV:B AS PER ECN 11-

| DQA:          |                                 |          | Date:      |       |             | MODIC ORDER MON              |          | <b>SNEO</b> ! | DRAABICE / 115      | DATE      |          |               |               | 27             | DART                   |
|---------------|---------------------------------|----------|------------|-------|-------------|------------------------------|----------|---------------|---------------------|-----------|----------|---------------|---------------|----------------|------------------------|
| QA Closed:    |                                 |          | Date:      |       |             | WORK ORDER NON-              | -((      | JINFOI        | KIVIAINCE / UF      |           | Wor      | rk Order up   | date only     |                | AEROSPACE              |
| Mork Orde     | · ·                             |          |            |       |             | DISPOSITION                  |          |               |                     | AGAINST   | DEP.     | ARTMENT/      | PROCESS       | •              |                        |
| Work Orde     | er. —                           |          |            |       |             | Rework                       | ıl       |               | Skid-tube           | Crosstube | $\neg$   |               | Water Jet     | ٦,             | ngingoring             |
| Part N        | No.                             |          |            |       |             | Scrap                        |          |               | Machining Machining | Small Fab | $\dashv$ | Prov          | d. Eng. Coor. | ┦ "            | Engineering Quality    |
| , aiti        | •••                             |          |            |       | _           | Use-as-is                    |          |               | noforming           | Finishing | $\dashv$ |               | e/Packaging   | $\dashv$       | Other                  |
| NCR N         | No.                             |          |            |       |             | Suspected Unapproved         |          | 1110111       | Large Fab           | Composite | $\dashv$ | 1100/3101     | Supplier      | $\dashv$       |                        |
|               |                                 |          |            |       |             |                              | ,        |               |                     | ו         |          |               |               |                |                        |
| Root          |                                 |          |            | ·     | Desc        | ription of work order update | ı        | nitial        | Acti                | ion       |          | Sign &        |               |                |                        |
| Cause         |                                 | Date     | Step       | Qty   |             | or non-conformance           | Ch       | ief Eng       | Descri              | iption    |          | Date          | Verification  |                | QC Inspector           |
| Design        |                                 |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Doc/Data      | Ш                               |          |            |       |             |                              |          |               |                     |           |          |               |               | İ              |                        |
| Equip/Tooling |                                 |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Handling/Pre  | Ш                               |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Material      | Ш                               |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Operator      | Ш                               |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Offset/Setup  |                                 |          |            |       |             | •                            |          |               |                     |           |          |               |               |                |                        |
| Process       |                                 |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Supplier      |                                 |          |            |       |             |                              |          |               |                     |           |          |               |               |                |                        |
| Training      | Ш                               |          |            |       |             |                              |          |               | ŀ                   |           | ľ        |               |               |                |                        |
| Transport     | Ш                               | i        |            |       |             |                              | }        |               |                     |           |          |               |               |                |                        |
| Unapproved    |                                 |          |            |       |             |                              | <u> </u> |               |                     |           |          |               | <u>,</u>      |                | <del>, , , , , ,</del> |
| <del></del>   |                                 |          |            |       |             |                              | FAI      | ULT CA        | regory              |           |          |               |               |                |                        |
| Landi         |                                 |          |            |       | <del></del> | General                      |          | 1 .           |                     | ,         |          |               | -             | _              |                        |
|               | $\vdash$                        | ending   |            |       | <u> </u>    | Bend                         | <u> </u> | 1 '           | rogram              |           | -        | Outside Dim   | <b>⊢</b>      |                | essure/Forced          |
|               | $\boldsymbol{\vdash}$           |          | t Concer   | ntric | <u> </u>    | BOM/Route                    | <u> </u> | Grain         |                     | ļ         | $\vdash$ | Over/Under    | <b>⊢</b>      | —              | t-up                   |
|               |                                 | racks    |            |       | <u> </u>    | Broken/Damage/Defect         |          | Hardwa        |                     |           | -        | Part Incorrec | <b>⊢</b>      |                | mperature/Cure         |
|               | $\vdash$                        |          | k/Ripple   | /Wave |             | Burrs                        | _        | 1             | ion Incomplete/Un   | · •       | -        | Part Lost/Mi  | ssing         | $\dashv^{w_i}$ | eld                    |
|               | ——                              | uffs     |            |       | <u> </u>    | Contamination                |          | -             | tions Incomplete/U  | Inclear   | _        | Part Moved    | L             | \w             | rong Stock Pulled      |
|               | -                               | rushing  |            |       | <u> </u>    | Countersink                  | $\vdash$ |               | gned/off center     | ļ         | _        | Positioned W  |               |                |                        |
|               | $oldsymbol{oldsymbol{	ext{H}}}$ | eat Trea |            |       | <u> </u>    | Cut Too Short                |          | Mislabe       |                     | Į         |          | Power Loss/S  | Surge         | Ot             | her                    |
|               | —                               | •        | Strip in   | Tube  | <u> </u>    | Drawing                      | <u></u>  | Misread       |                     |           | _        |               |               | ···            |                        |
|               | ${f -}$                         | 1arks/Ch |            |       | <u> </u>    | Drill Holes                  |          | Off-set       | _                   |           | _        |               | <u> </u>      |                |                        |
|               | $\overline{}$                   | _        | equence    |       |             | Finish                       |          | +             | Calibration `       |           | _        |               |               |                |                        |
|               | Ιlw                             | Jave/Tw  | ist in Tuh | ne.   |             | Fit/Function                 | ı        | lout of       | Saguanca            |           |          |               |               |                |                        |

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June-12-13 9:25:52 AM

| Work Order ID:              | 103045                    |    |                 |         |      |            |              |          |                        |
|-----------------------------|---------------------------|----|-----------------|---------|------|------------|--------------|----------|------------------------|
| Parent Item:                | D4092-041                 |    |                 |         |      | Start D    | ate: 6/11/13 | ]        | Required Date: 6/11/13 |
| Parent Item Name:           | Maintenance Step Assembly |    |                 |         |      | Start (    | Qty: 2.00    |          | Required Qty: 2.00     |
| MS24694-S55<br>Screw        | Purchased                 | No |                 | 100     | Each | 179.0000   | 8            | 16       | M.D. 13-07-23          |
|                             |                           |    | <b>Location</b> | Loc Qty |      | Loc Code   |              |          | ι                      |
|                             |                           |    | ST303           | 179     |      |            |              |          |                        |
|                             |                           |    | 124296          | 61      |      |            |              |          |                        |
|                             |                           |    | 125535          | 118     |      |            | -16×         | ——       |                        |
| <b>MS24694-S56</b><br>SCREW | Purchased                 | No |                 | 100     | Each | 102.0000   | 2            | 4        | M. Ll.                 |
|                             |                           |    | <b>Location</b> | Loc Qty |      | Loc Code   |              |          | l                      |
|                             |                           |    | ST303           | 102     |      |            |              |          |                        |
|                             |                           |    | 121340          | 10      |      |            | <del></del>  |          |                        |
|                             |                           |    | 125535          | 92      |      |            | 4×           |          |                        |
| NAS1149D0332J<br>Washer     | Purchased                 | No |                 | 100     | Each | 3,620.0000 | 12           | 24       | 1.60.                  |
|                             |                           |    | Location        | Loc Oty |      | Loc Code   |              |          | ı                      |
|                             |                           |    | ST293           | 202     |      |            |              |          |                        |
|                             |                           |    | 125268          | 202     |      |            |              |          |                        |
|                             |                           |    | ST294           | 3418    |      |            |              |          |                        |
|                             |                           |    | 122973          | 68      |      |            |              | <u></u>  |                        |
|                             |                           |    | 125044          | 350     |      |            | - 011        |          |                        |
|                             |                           |    | m125807         | 3000    |      |            | 24           | <b>X</b> |                        |
|                             |                           |    |                 |         |      |            |              |          |                        |

Page 2

| DQA:          |         | Date          | :        |      |                                   |          |                       |                        |                        |            |                |                            | TRACT                                 |
|---------------|---------|---------------|----------|------|-----------------------------------|----------|-----------------------|------------------------|------------------------|------------|----------------|----------------------------|---------------------------------------|
| QA Closed:    |         | Date          | :        |      | WORK ORDER NON-                   | -CC      | ONFO                  | RMANCE / UI            |                        | Wor        | k Order up     | date only                  | AEROSPACE                             |
|               |         | 11.1          |          |      | DISPOSITION                       |          |                       |                        | AGAINST I              | DEP        | ARTMENT/       | /PROCESS                   | •                                     |
| Work Orde     | er:     |               | <u> </u> |      | 0                                 | ,        |                       | artin entre            | C                      | _          |                | \A/a+a= 1a+                |                                       |
| Part N        | lo.     |               |          |      | Rework Scrap                      |          |                       | Skid-tube<br>Machining | Crosstube<br>Small Fab | $\dashv$   | Proc           | Water Jet<br>d. Eng. Coor. | Engineering Quality                   |
| NCR N         | lo      |               |          |      | Use-as-is<br>Suspected Unapproved |          | Thern                 | noforming Large Fab    | Finishing<br>Composite |            | Rec/Stor       | e/Packaging<br>Supplier    | Other                                 |
| Root          |         |               | 1        | Dosc | ription of work order update      |          | nitial                | Act                    | ion                    | <u>-</u> T | Sign 9.        |                            |                                       |
| Cause         | Da      | te Step       | Qty      | Desc | or non-conformance                | l        | iiililiai<br>iief Eng |                        | ription                |            | Sign &<br>Date | Verification               | QC Inspector                          |
| Design        | Da      | ie step       | Qty      |      | or non-comormance                 | CII      | ilei, crig            | Desci                  | iption                 | $\dashv$   | Date           | vermeation                 | QC mspector                           |
| Doc/Data      |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Equip/Tooling |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Handling/Pre  |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Material      | _       |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Operator      |         |               | 1        |      |                                   |          |                       | ,                      |                        |            |                |                            |                                       |
| Offset/Setup  |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Process       | -       |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Supplier      |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Training      |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
| Transport     |         |               |          |      |                                   | İ        |                       |                        |                        |            |                |                            |                                       |
| Unapproved    |         |               |          |      |                                   |          |                       |                        |                        |            |                |                            |                                       |
|               | <b></b> |               |          | •    |                                   | FA       | ULT CA                | regory                 |                        |            |                |                            |                                       |
| Landir        | ng Gear |               |          |      | General                           |          |                       |                        | ,                      |            |                |                            |                                       |
|               | Bend    | ng            |          |      | Bend                              |          | Folio/F               | rogram                 | [                      | $\Box$     | Outside Dim    | ensions [                  | Pressure/Forced                       |
| Ì             | _       | e Not Conce   | entric   |      | BOM/Route                         |          | Grain                 | Ü                      | Ì                      | -          | Over/Under     | <b>⊢</b>                   | Set-up                                |
|               | Crack   | S             |          |      | Broken/Damage/Defect              |          | Hardwa                | ire                    |                        | _          | art Incorrec   | <b>├</b>                   | Temperature/Cure                      |
|               | Crim    | /Kink/Rippl   | le/Wave  | -    | Burrs                             |          | -{                    | ion Incomplete/Ur      | ngualified             |            | art Lost/Mi    | <u> </u>                   | Weld                                  |
|               | Cuffs   |               | •        |      | Contamination                     | $\vdash$ | - i                   | ions Incomplete/U      | 1                      | -          | art Moved      | Ť                          | Wrong Stock Pulled                    |
|               | Crush   | ing           |          |      | Countersink                       |          | -1                    | ned/off center         |                        | _          | ositioned W    | ∟<br>Vrong                 |                                       |
|               | Heat    | -             |          |      | Cut Too Short                     |          | Mislabe               |                        |                        | $\vdash$   | ower Loss/     | _                          | Other                                 |
|               |         | ction Strip i | n Tube   |      | Drawing                           |          | Misread               | d                      | ı                      |            | ·              | ·                          | ı                                     |
|               |         | s/Chatter     |          |      | Drill Holes                       | Г        | Off-set               |                        |                        | -          |                |                            |                                       |
|               | _       | ng Sequenc    | e        |      | Finish                            |          | -                     | Calibration            |                        | _          |                |                            |                                       |
|               |         | /Twist in Tu  |          |      | Fit/Function                      | $\vdash$ | 4                     | Seguence               |                        | _          |                |                            | · · · · · · · · · · · · · · · · · · · |

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

June-12-13 9:25:52 AM

Work Order ID:

103045

Parent Item:

D4092-041

Parent Item Name:

Maintenance Step Assembly

MS21042L3

**Start Date:** 6/11/13

Required Date: 6/11/13

Start Qty: 2.00

Required Qty: 2.00

2,195.0000 100 Each No Purchased Nut

| <u>Location</u> | Loc Qty | Loc Code |             |
|-----------------|---------|----------|-------------|
| FP001           | 3       |          | 126036      |
| 122141          | 3       |          |             |
| GA              | 18      |          | <del></del> |
| 122452          | 18      |          |             |
| ST314           | 268     |          |             |
| 117885          | 32      |          |             |
| 119017          | 55      |          |             |
| 119075          | 138     |          | A STANLAND  |
| 123265          | 43      |          | ***         |
| ST506           | 1906    |          |             |
| 123900          | 954     |          |             |
| 124291          | 952     |          |             |

| DQA:          |         | _ Date:      |        |      | WORK ORDER NON-              | cc | NEO      | DNANICE / LIDE      | ATE                 |  |                            | ~DART                                   |
|---------------|---------|--------------|--------|------|------------------------------|----|----------|---------------------|---------------------|--|----------------------------|---|
| QA Closed:    |         | Date:        |        |      | WORK ORDER NON-              |    | JINFO    | RIVIAINCE / UPD     |                     | ork Order up                           | odate only                 | AEROSPACE                               |
|               |         |              |        |      | DISPOSITION                  |    |          | -                   | AGAINST D           | EPARTMENT                              | /PROCESS                   |   |
| Work Orde     | ır:     |              |        |      | Daaul                        |    |          | ا ماریم ایزیای      | ر<br>- مارسور       | 7                                      | \A/a+a= 1a+                | ]                                       |
| Part N        | lo.     |              |        |      | Rework Scrap                 |    |          | <b>⊢</b>            | Crosstube Small Fab | - Dro                                  | Water Jet<br>d. Eng. Coor. | Engineering Quality                     |
| raitiv        |         |              |        |      | Use-as-is                    |    |          | noforming           | Finishing           |  | re/Packaging               | Other                                   |
| NCR N         | lo.     |              |        |      | Suspected Unapproved         |    | THETT    | <b>T</b>            | Composite           | 1 1160/3101                            | Supplier                   |   |
|               |         |              |        |      |                              |    |          | 20.80 102           |                     |  | 3uppne                     |   |
| Root          |         |              |        | Desc | ription of work order update | Ī  | nitial   | Action              | า                   | Sign &                                 |                            |   |
| Cause         | Date    | Step         | Qty    |      | or non-conformance           | Ch | ief Eng  | Descript            | tion                | Date                                   | Verification               | QC Inspector                            |
| Design        |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Doc/Data      |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Equip/Tooling |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Handling/Pre  |         |              |        |      |                              | İ  |          |                     |                     |  |                            |   |
| Material      |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Operator      |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Offset/Setup  |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Process       |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Supplier      |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Training      |         |              |        |      |                              |    |          | 1                   |                     |  |                            |   |
| Transport     |         |              |        |      |                              |    |          |                     |                     |  |                            |   |
| Unapproved    |         |              |        |      |                              |    | _        |                     |                     |  |                            |   |
|               |         |              |        |      |                              | FΑ | JLT CA   | regory              |                     |  |                            |   |
| Landir        | ng Gear |              |        |      | General                      |    | _        |                     |                     |  |                            |   |
|               | Bendin  | g            |        |      | Bend                         |    | Folio/F  | rogram              |                     | Outside Dim                            | ensions                    | Pressure/Forced                         |
|               | Centre  | Not Conce    | ntric  |      | BOM/Route                    |    | Grain    |                     |                     | Over/Under                             | tolerance                  | Set-up                                  |
|               | Cracks  |              |        |      | Broken/Damage/Defect         |    | Hardwa   | ire                 | Γ                   | Part Incorred                          | ct 🗍                       | Temperature/Cure                        |
|               | Crimp/  | Kink/Ripple  | e/Wave |      | Burrs                        |    | Inspect  | ion Incomplete/Unqu | alified             | Part Lost/Mi                           | ssing                      | Weld                                    |
|               | Cuffs   |              |        |      | Contamination                |    | Instruct | ions Incomplete/Unc | lear                | Part Moved                             |                            | Wrong Stock Pulled                      |
| [             | Crushir | g            |        |      | Countersink                  |    | 1        | ned/off center      |                     | Positioned V                           | Vrong                      |   |
|               | Heat Tr | eat          |        |      | Cut Too Short                |    | Mislabe  | eled                |                     | Power Loss/                            | Surge                      | Other                                   |
|               | Inspect | ion Strip in | Tube   |      | Drawing                      |    | Misread  | d                   | _                   |  | <b></b>                    | -                                       |
|               | Marks/  | Chatter      |        |      | Drill Holes                  |    | Off-set  |                     |                     | ······································ |                            | , |
|               | Turning | s Sequence   | !      |      | Finish                       |    | Out of   | Calibration         |                     |  |                            |   |
|               | Wave/   | Γwist in Tul | be     |      | Fit/Function                 |    | Out of   | Sequence            |                     |  |                            |   |

| 6 10 9 | 7 6 10 | 2 |  |
|--------|--------|---|--|
|        |        |   |  |

QTY -041 PART NUMBER DESCRIPTION D4092-041 MAINTENANCE STEP ASSEMBLY D4092-1 MAINTENANCE STEP D4093-1 BRACKET D4093-3 D4093-5 BRACE 12 / MS21042L3 NUT 2 MS24694-S54 SCREW MS24694-S55 SCREW MS24694-S56 SCREW 12 NAS1149D0332J WASHER

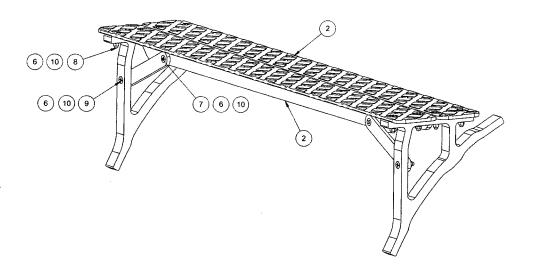
> $\mathcal{C} = \mathcal{C} Y$ CLE A PARENCE LATED COPY 11 NOMENT \* " OTICE 103045 MC5 13-06-13

| В  | REDRA  | WN; LOWERED | FOR AESTHETICS  | RF    | 11.07.27     |  |  |  |
|--|--------|-------------|-----------------|-------|--------------|--|--|--|
| Α  | NEW IS | SUE         |                 | RF    | 10.09.16     |  |  |  |
| REV.   |        |             | DESCRIPTION     | BY    | DATE         |  |  |  |
| DESIG  | N      | RF          | DART AEROSPAC   | FIISA | INC          |  |  |  |
| DRAW   | N      | RF          | KENT, W         |       | ,            |  |  |  |
| CHECK  | ED     | 140         | DRAWING NO.     |       | REV. B       |  |  |  |
| MFG. A   | PPR.   | 91          | D4092           |       | SHEET 1 OF 6 |  |  |  |
| APPRO  | VED    | 148         | TITLE           |       | SCALE        |  |  |  |
| DE APP   | PR.    | #           | MAINTENANCE STE | P ASS | Y NTS        |  |  |  |
| DATE 11.07.27 COPYRIGHT 0 2010 BY DART AEROSPACE USA, INC. THIS COCUMENT OF PRIVITY WITH OND OFFICE HEAD CONTROL HEAD OF THE C |        |             |                 |       |              |  |  |  |

**D4092-041 MAINTENANCE STEP ASSEMBLY** 

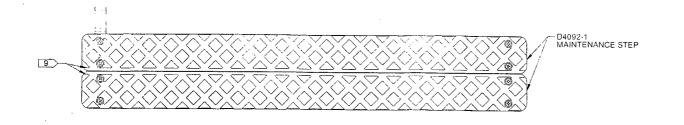
103045

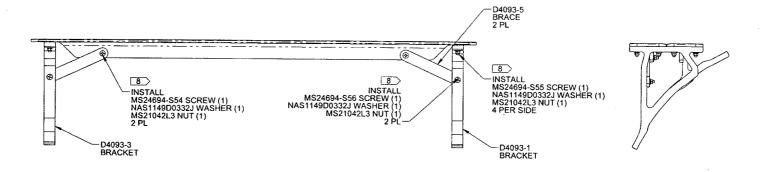
| TEM QTY P/N |    |               | DESCRIPTION               |  |  |
|-------------|----|---------------|---------------------------|--|--|
| 1           | X  | D4092-042     | MAINTENANCE STEP ASSEMBLY |  |  |
| . 2         | 2  | D4092-1       | MAINTENANCE STEP          |  |  |
| . 3         | 1  | D4093-1       | BRACKET                   |  |  |
| 4           | 1  | D4093-3       | BRACKET                   |  |  |
| 5           | 2  | D4093-5       | BRACKET                   |  |  |
| 6           | 12 | MS21042L3     | NUT                       |  |  |
| . 7         | 2  | MS24694-S54   | SCREW                     |  |  |
| 8           | 8  | MS24694-S55   | SCREW                     |  |  |
| 9           | 2  | MS24694-S56   | SCREW                     |  |  |
| 10          | 12 | NAS1149D0332J | WASHER                    |  |  |



D4092-042 MAINTENANCE STEP ASSEMBLY

| DESIGN RF     |     | DART AEROSPACE USA, INC.  |           |
|---------------|-----|---|-----------|
| DRAWN         | RF  | KENT, WA  |           |
| CHECKED       | NP  | DRAWING NO.   | REV. B    |
| MFG. APPR.    | all | D4092 <sub>SHE</sub>  | ET 2 OF 6 |
| APPROVED      | 140 | TITLE   | SCALE     |
| DE APPR.      | -#- | MAINTENANCE STEP ASS'Y  | NTS       |
| DATE 11.07.27 |     | COPYRIGHT © 2010 BY DART AEROSPACE USA, INC.  THIS DOCUMENT IS PROVATE AND COMPONENTUL AND IS SUPPLIED ON THE EXPRESS COMPONENT HART IT IS NOT TO BE USED FOR ANY HAPPOSE ON COMPONENT TO TO ANY EXPRESS POSSON WITHOUT |           |



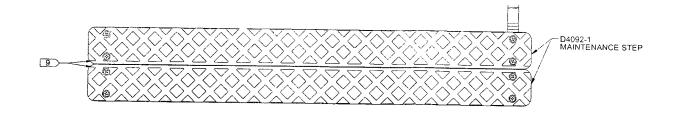


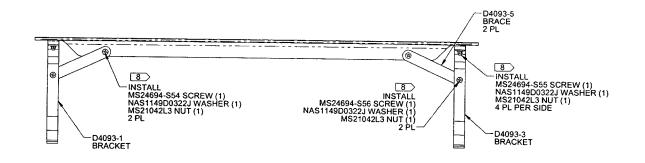
## **D4092-041 MAINTENANCE STEP ASSEMBLY**

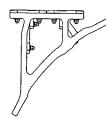


NOTES:
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: PER QSI 044 6.1
7) WEIGHT: 5.37 Ibs
8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
9) GRIP CUTOUT TOWARD CENTER

| DESIGN        | RF  | DART AEROSPACE USA, INC.   |           |
|---------------|-----|--|-----------|
| DRAWN         | RF  |  |           |
| CHECKED       | 140 | DRAWING NO.  | REV. B    |
| MFG. APPR.    | 91  | ☐ D4092 <sub>SHE</sub>   | ET 3 OF 6 |
| APPROVED      | NP  | TITLE  | SCALE     |
| DE APPR.      | -#  | MAINTENANCE STEP ASS'Y   | NTS       |
| DATE 11 07 27 |     | COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONCIDENT THAT IT IS |           |







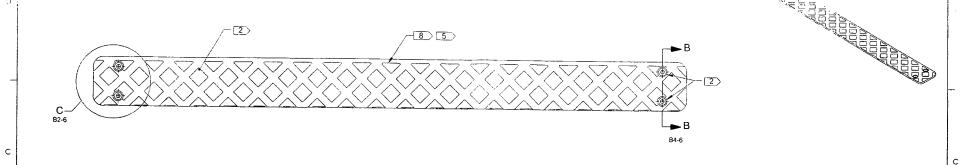
## **D4092-042 MAINTENANCE STEP ASSEMBLY**

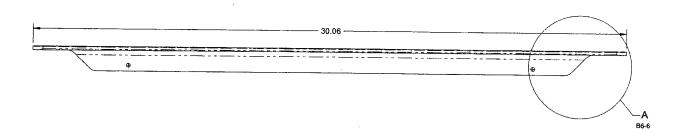
| NUTES:           |
|------------------|
| 1) MATERIAL: N/A |
|                  |
| 2) FINISH: N/A   |
|                  |

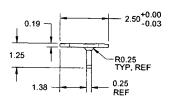
2) FINISH: NY.
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: PER QSI 044 6.1
7) WEIGHT: S.7 lbs
8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
9) GRIP CUTOUT TOWARD CENTER

8

| DESIGN RF     |     | DART AEROSPACE USA, INC.  |           |
|---------------|-----|---|-----------|
| DRAWN         | RF  | KENT, WA  |           |
| CHECKED       | 140 | DRAWING NO.   | REV. B    |
| MFG. APPR.    | 9/  | □D4092 <sub>SHE</sub>   | ET 4 OF 6 |
| APPROVED      | 14  | TITLE   | SCALE     |
| DE APPR.      | -#  | MAINTENANCE STEP ASS'Y  | NTS       |
| DATE 11.07.27 |     | COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLED ON THE EXPRESS CONGRIDED THAT IT IS |           |





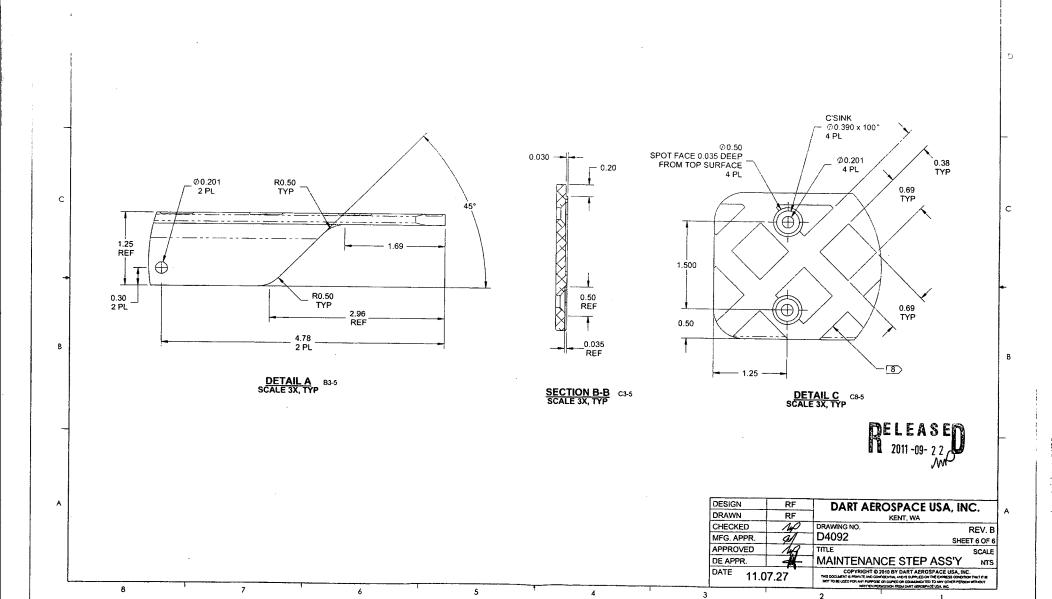


D4092-1 MAINTENANCE STEP (MAKE FROM D2761 EXTRUSION)

DELEASED 2011-09- 2,2

| NOTES:               |   |
|----------------------|---|
| 1) MATERIAL: MAKE    | FROM D2761 EXTRUSION                                      |
| 2) FINISH: CHEMICAL  | CONVERSION COAT PER DART OSI 005 4.1                      |
| BLACK AN             | TI-SKID PAINT GRIP AREA AS INDICATED PER DART OSI 005 4.4 |
| MASK REC             | CTANGULAR CUTOUT PRIOR TO APPLICATION OF ANTI-SKID        |
| 3) TOLERANCES: PE    | R DART QSI 018 UNLESS OTHERWISE NOTED                     |
|                      | ILESS OTHERWISE NOTED                                     |
| 5) BREAK SHARP ED    | GES: 0.005 TO 0.010 MAX, NOT REQUIRED TO DEBURR GRIP AREA |
| 6) IDENTIFICATION: I | √/A   |
| 7) WEIGHT: 1.97 lbs  |   |
| 8) MACHINE 0.69 x 0. | 69 GRIP 0.030 DEEP AT 45 * PATTERN 0.38 APART             |

| DESIGN        | RF  | DART AEROSPACE USA, IN  |           |  |
|---------------|-----|---|-----------|--|
| DRAWN RF      |     | KENT, WA  |           |  |
| CHECKED       | 140 | DRAWING NO.   | REV. B    |  |
| MFG. APPR.    | al  | 1 DANG2   | ET 5 OF 6 |  |
| APPROVED      | 149 | TITLE   | SCALE     |  |
| DE APPR.      |     | MAINTENANCE STEP ASS'Y  | NTS       |  |
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<u>\_\_\_\_</u>